

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 12/30/04, 12/17/07, 2/15/08, 5/2/08, 6/3/08, 7/1/08, 7/15/08, 8/27/08, 11/12/08, 11/19/08, and 12/24/08 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Objections

2. Claims 2-3 and 6-7 are objected to because of the following informalities: the preamble of claims 2-3 and 6-7 should be amended to start with the word "The" instead of the word "A" to show proper dependence on corresponding independent claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the

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invention. Claims 1 and 5 recite a UDDI object having a non-compound data structure and a compound data structure. However, the meaning of these terms is unclear, and the terms are not explained in the specification. The PG-Pub of the specification describes that business entities, business services, binding templates and tmodels have compound repeating elements (paragraph 15), and that much like the business Entity, a contact holds a variety of compound repeating elements, necessitating the use of child object classes (paragraph 287). These recitations in the specification are not sufficient to explain the compound data structure and the non-compound data structure as claimed. In fact, outside of the abstract and summary of the invention, which are verbatim to claims 1 and 5, the specification does not even include the terms “compound data structure” and “non-compound data structure”.

5. Furthermore, it is unclear as to how a directory child object having an attribute representing each field is provided for each value. While, Figure 15 and paragraphs 229-232 seem to be related to the limitations claimed in claims 1 and 5, the disclosure still fails to describe a value in a way that relates to the claims. For example, the specification states that “Bill” is the value for the attribute “AuthorizedName” (paragraph 28). A value equal to “Bill” does not have a plurality of fields, and furthermore it is unclear as to how a directory child object having an attribute representing each field, as claimed, can be provided for each value. It seems as if a value should be provided for each attribute, and not vice versa. Claims 2-3 and 6-7 are rejected as being dependent upon rejected claims 1 and 5.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. As explained above regarding claims 1-3 and 5-7, the terms "compound data structure" and "non-compound data structure" are unclear. Also, the use of the term "value" is ambiguous. Claims 2-3 and 6-7 are rejected as being dependent upon rejected claims 1 and 5.

9. Claims 4 and 8 recite, in part, "removing that portion of the hierarchy determined to have a one-to-one relationship." However, the term "that portion" is unclear and indefinite. Furthermore, the claim recites a portion determined to have a one-to-one relationship, but there is no step of actually determining a one-to-one relationship. Claims 4 and 8 also recite flattening by moving contents into at least one child portion. However, the specification teaches flattening by moving contents into a parent portion and not a child portion (paragraph 134 of the PG-Pub).

10. Claims 4 and 8 recite the limitation "the hierarchy" in line 6 of the claims. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-3 are directed to a method for use in a web services system. However, the claims do not positively recite the particular machine or apparatus to which the method is tied. For example, the claims do not explicitly recite the particular machine or apparatus, nor do they recite any steps that inherently involve the use of a particular machine or apparatus. As such, the claims are directed to non-statutory subject matter.

Claim 4 is directed to a method of flattening a hierarchy in a web services arrangement. However, the claim does not positively recite the particular machine or apparatus to which the method is tied. For example, the claim does not explicitly recite the particular machine or apparatus, nor does it recite any steps that inherently involve the use of a particular machine or apparatus. As such, the claim is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Cutlip (US 2004/0039738 A1).

With respect to claims 1 and 5, Cutlip teaches a method for use in a web services system having complex UDDI object(s) (paragraphs 4 and 24) having at least one non-compound data structure and at least one compound data structure, each compound data structure having at least one value, each value having a plurality of fields (Figs. 3, 10, 15A and 15B, paragraphs 43, 45 and 70), the method comprising:

providing in a directory parent object, an attribute representing each non-compound data structure (Figs. 3 and 10, paragraph 40 and 43); and

providing for each at least one value, a directory child object having an attribute representing each field of compound data structure (Figs. 3, 15A and 15B, paragraphs 40, 43 and 70).

With respect to claims 2 and 6, Cutlip teaches repeating providing for each at least one value where the field is compound (Figs. 3, 15A and 15B, paragraphs 40, 43 and 70).

With respect to claims 3 and 7, Cutlip teaches wherein the complex UDDI object(s) is at least one of a business entity, business service, binding template and tmodel (Fig. 3, paragraph 43).

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14. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Gadbois et al. (US 2004/0002955 A1) ('Gadbois').

With respect to claims 1 and 5, Gadbois teaches a method for use in a web services system having complex UDDI object(s) (paragraphs 21 and 24) having at least one non-compound data structure and at least one compound data structure, each compound data structure having at least one value, each value having a plurality of fields (Fig. 2, paragraphs 27-28), the method comprising:

providing in a directory parent object, an attribute representing each non-compound data structure (Fig. 2, paragraph 27); and

providing for each at least one value, a directory child object having an attribute representing each field of compound data structure (Fig. 2, paragraphs 28-29).

With respect to claims 2 and 6, Gadbois teaches repeating providing for each at least one value where the field is compound (Fig. 2, paragraphs 28-29).

With respect to claims 3 and 7, Gadbois teaches wherein the complex UDDI object(s) is at least one of a business entity, business service, binding template and tmodel (Fig. 2, paragraph 27).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (US 6,834,286 B2) ('Srinivasan') in view of Gadbois et al. (US 2004/0002955 A1) ('Gadbois').

With respect to claims 1 and 5, Srinivasan teaches a method for use in a directory system having at least one non-compound data structure and at least one compound data structure, each compound data structure having at least one value, each value having a plurality of fields the method comprising:

providing in a directory parent object, an attribute representing each non-compound data structure (Fig. 1, column 1 line 66 - column 2 line 4); and

providing for each at least one value, a directory child object having an attribute representing each field of compound data structure (Fig. 1, column 2 lines 3-13).

Srinivasan does not teach the method for use in a web services system having complex UDDI object(s).

Gadbois teaches an informational model mapping with shared directory tree representations (see abstract), in which he teaches a web services system having complex UDDI object(s) (paragraphs 21 and 24).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Srinivasan by the teaching of Gadbois because a web services system having complex UDDI object(s) would enable an efficient means of recording and publishing assertions regarding relationships of different business organizations (Gadbois, paragraph 4), enable a registry service to support storage and retrieval of data (Gadbois, paragraph 25).

With respect to claims 2 and 6, Srinivasan as modified teaches repeating providing for each at least one value where the field is compound (Srinivasan, Fig. 1, column 2 lines 3-13 and 36-50).

With respect to claims 3 and 7, Srinivasan teaches wherein the complex UDDI object(s) is at least one of a business entity, business service, binding template and tmodel (Srinivasan, column 1 line 66 - column 2 line 3; Gadbois, paragraph 27).

17. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colgan (US 5,956,499) in view of Gadbois et al. (US 2004/0002955 A1) ('Gadbois').

With respect to claims 4 and 8, Colgan teaches a method of flattening a hierarchy, the method comprising:

determining whether any portion of a hierarchical structure or relationship has a one-to-one relationship between objects (column 2 lines 47-62 and Table 1; fig. 4A); and

removing that portion of the hierarchy determined to have a one-to-one relationship by moving contents of attributes into at least one portion of the hierarchy (column 3 lines 1-12 and Table 2; fig. 4B).

Colgan does not teach a hierarchy in a web services arrangement.

Gadbois teaches informational model mapping with shared directory tree representations (see abstract), in which he teaches a hierarchy in a web services arrangement (Fig. 2; paragraph 24).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Colgan by the teaching of Gadbois because a hierarchy in a web services arrangement would enable a registry service for efficient organization of relationships, including those between business organizations (Gadbois, paragraph 4).

18. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elmore et al. (US 2006/0059107 A1) ('Elmore') in view of Colgan (US 5,956,499).

With respect to claims 4 and 8, Elmore teaches a method of flattening a hierarchy in a web services arrangement, the method comprising:

determining whether any portion of a hierarchical structure or relationship in the web services arrangement has a one-to-one relationship between objects (paragraph 328).

Elmore does not teach removing that portion of the hierarchy determined to have a one-to-one relationship by moving contents of attributes into at least one child portion of the hierarchy.

Colgan teaches a method and system for non-model based application transitioning (see abstract), in which he teaches removing that portion of the hierarchy determined to have a one-to-one relationship by moving contents of attributes into at least one child portion of the hierarchy (column 3 lines 1-12 and table 2; fig. 4B).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Elmore by the teaching of Colgan because removing that portion of the hierarchy determined to have a one-to-one relationship by moving contents of attributes into at least one child portion of the hierarchy would enable a reduction in the number of entities in a model or hierarchy and thus make the model or hierarchy easier to work with (Colgan, column 2 lines 47-60).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. M. L./
Examiner, Art Unit 2164
February 17, 2009

/Charles Rones/
Supervisory Patent Examiner, Art Unit 2164